REMARKS/DISCUSSION OF ISSUES

Claims 1-16 are pending in the application. Claims 1-13 are rejected. The specification is objected to by the Examiner.

The Examiner's acknowledgement of the claim for priority and receipt of copies of the priority documents, as well as acceptance of the drawings, is noted with appreciation.

The specification is objected to in that the title is not descriptive. A new, more descriptive title is presently provided.

Claims 1-5 and 9-13 are rejected under 35 USC 103(a) as being unpatentable over Hendricx et al (WO 200067294 A1)(herein 'Hendricx') in view of Bruninx-Poesen et al (US 4422011)(herein 'Bruninx-Poesen').

Hendricx discloses a metal halide of the same general type as that claimed by Applicant, i.e., a relatively small, compact lamp suitable for use as a headlamp for motor vehicles. As discussed in Applicant's specification, Hendricx' lamp has several drawbacks, due to chemical transport and segregation of the NaI/CeI_3 salt mix.

Hendricx does not teach or suggest the use of other iodide salts. Bruninx-Poesen is cited to show the use of rare earth iodides as ionizable salts in 'the same field of endeavor'.

Bruninx-Poesen discloses a high-pressure mercury vapor discharge lamp containing a rare gas, mercury, a sodium halide and one or more rare earth halides including Ce, Pr, Nd and Lu halides.

Bruninx-Poesen shows a lamp with a generally cylindrical discharge vessel in Fig. 1. However, this is a much larger discharge vessel, having an internal diameter of 15.5 mm (col. 3, line 53), compared to Applicant's claims 1 and 9, which call

for an internal diameter of less than 2.0 mm, preferably less than 1.5 mm. Moreover, the internal pressure of Bruninx-Poesen's discharge vessel is much smaller, as indicated by an inert gas pressure of only 3300 Pa (e.g., col. 4, line 5), which is equivalent to 0.033 bar. This compares to Applicant's claim 1, which calls for a much higher inert gas pressure of between 5 and 25 bars.

Thus, while Bruninx-Poesen relates to high pressure discharge lamps, the much larger discharge space and much smaller internal pressure of these lamps would lead the skilled artisan to conclude that the teachings of Bruninx-Poesen regarding the internal chemistry of the discharge space would not be applicable to Applicant's lamp.

This conclusion is consistent with and reinforced by the fact that Bruninx-Poesen teaches a much lower amount of rare earth metal halide, i.e., from 1 to 25 µmol/cm^3 (see, e.g., col. 3, line 24), compared to Applicant's claim 4, which call for a range of from 10 to 335, preferably 50 µmol/cm^3 of Pr.

Regarding claim 10, Bruninx-Poesen calls for an electrode spacing of 40 mm (col. 3, line 53), compared to the much smaller range of 3 to 7 mm called for by Applicant.

Regarding claim 11, Bruninx-Poesen calls for a quartz glass discharge vessel (col. 3, lines 43, 44 and 57), compared to the ceramic discharge vessel called for by Applicant.

Regarding claim 12, Bruninx-Poesen does not call for an outer envelope of any kind, compared to the gas-filled outer bulb called for by Applicant.

Regarding claim 13, Bruninx-Poesen calls for a power range of from 10 up to 2000 W, compared to the much smaller power range of 20 to 40 W called for by Applicant.

Thus, Bruninx-Poesen not only does not teach or suggest the various aspects of Applicant's invention as set forth in the above-referenced claims, he actually leads the skilled artisan away from the claimed invention.

Accordingly, claims 1-5 and 9-13 are patentable over the combination of Hendricx and Bruninx-Poesen, and the rejection should be withdrawn.

The allowability of claims 6-8 if rewritten in independent form to include the limitations of claims 1 and 2 is noted with appreciation.

In view of the objection, claims 6-8 have been rewritten as suggested by the Examiner, and presented as new independent claims 14-16. However, in view of the above arguments, it is felt that claims 1 and 2 are allowable in their present form. Accordingly, it is urged that the objection to claims 6-8 be withdrawn.

Conclusion

In conclusion, Applicant respectfully requests that the Examiner withdraw the rejection and objection of record, allow all the pending claims, and find the application to be in condition for allowance.

Respectfully submitted,

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